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ABSTRACT

This book, produced for the American Samoa Department of Education Marine Enhancement Program, presents underwater color photography of coral reef life in an alphabetical resource. The specimens are described in English, and some are translated into the Samoan language. A picture-matching learning exercise and a glossary of scientific and oceanic terms are provided. (MM)

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The Coral Reef Alphabet Book

for

American Samoa

ED 463 965

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By Larry G. Madrigal

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The Coral Reef Alphabet Book

for

American Samoa

Text and photography

by

Larry G. Madrigal

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Dedication

For her never-ending love and support of all my endeavors,
I dedicate this book to my wife, Vineta.

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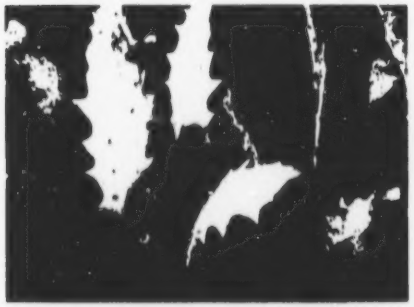
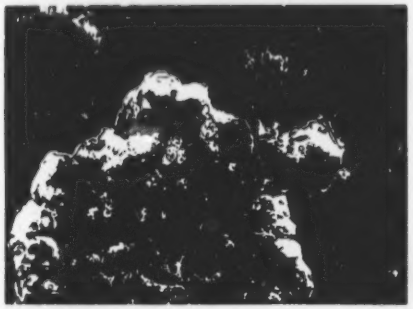
Aa

A is for **algae**. **Algae** are plants that grow in the ocean. **Algae** are food for many animals that live on a coral reef. Some **algae** help hold the coral reef together. Samoans like to eat certain kinds of **algae,** one of which is called *limu*.





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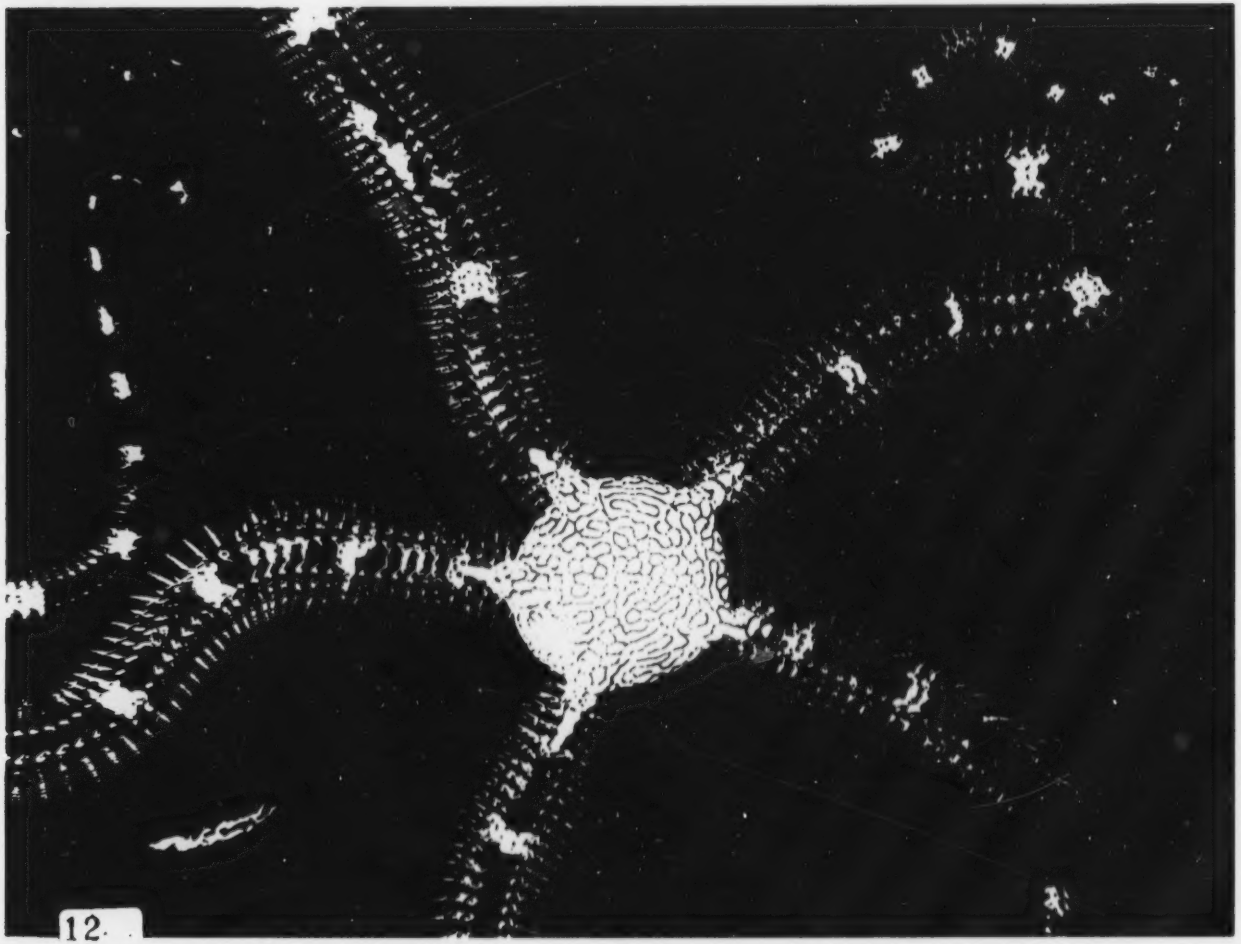
Bb

B is for **brittlestar**. **Brittlestars** have five long arms that break easily. In the daytime, **brittlestars** hide under rocks or in holes within the reef. At night, they come out to look for food. The Samoan name for **brittlestar** is *aveau*.



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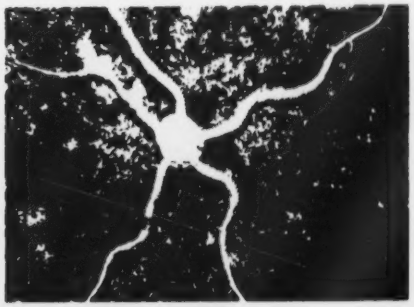
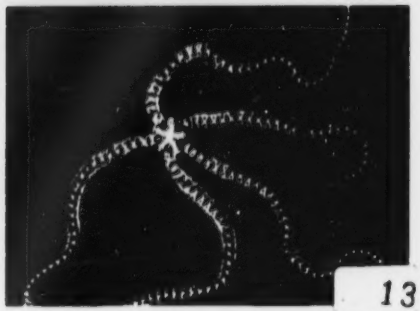
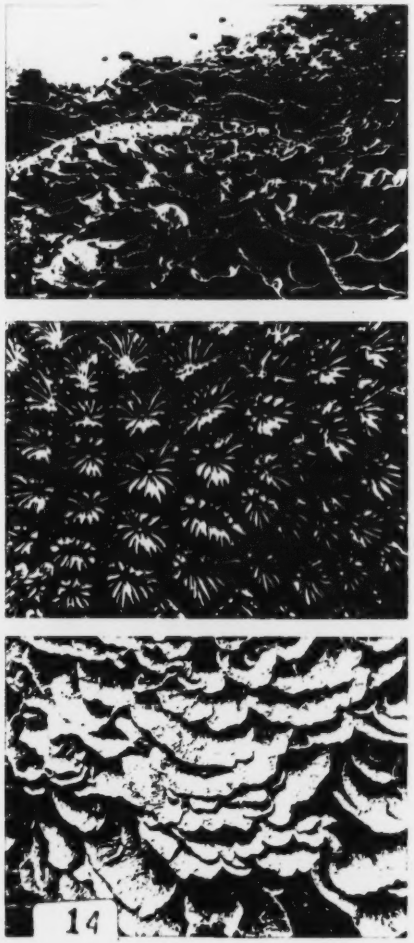


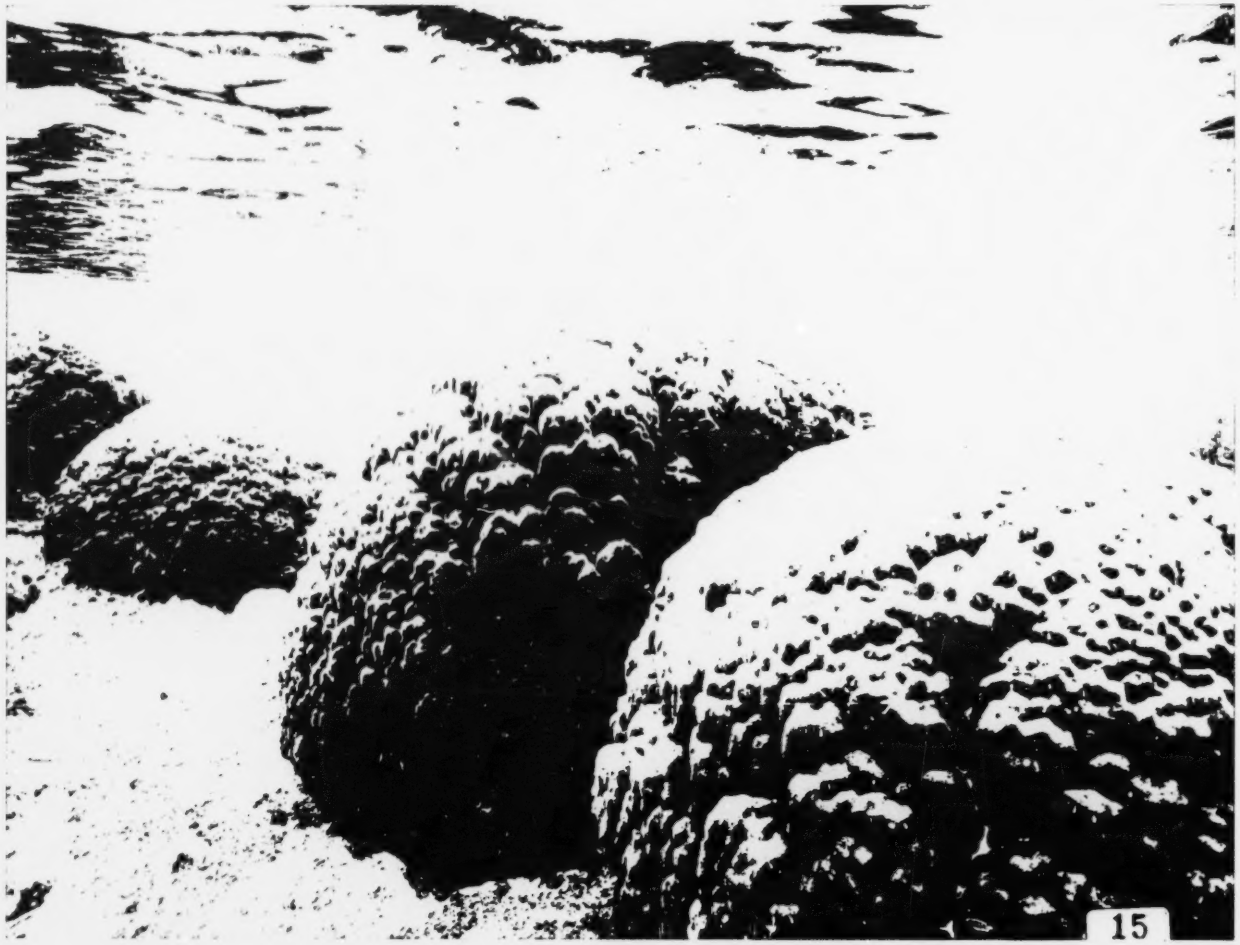


13

Cc

C is for **coral**. **Corals** are most often composed of colonies of small individual animals called polyps. **Corals** provide food and protection for many animals that live on and around a coral reef. Some **corals** have a hard skeleton, but others do not. The Samoan name for **coral** is *amu*.





Dd

D is for **damselfish. Damselfish** are small fish that swim between the branches of corals for protection from predators.

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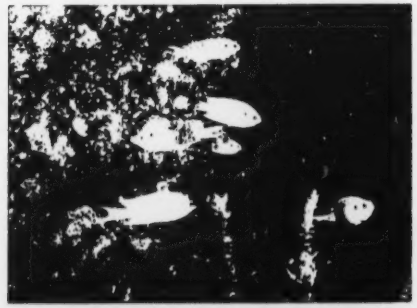

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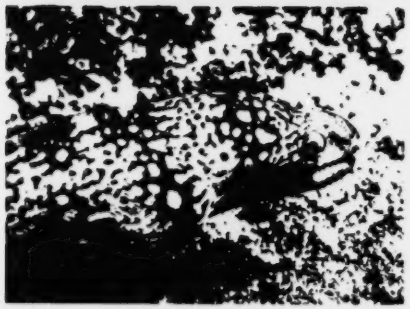
Ee

E is for **eel**. **Eels** live in holes and crevices of the coral reef. **Eels** have very sharp teeth for catching and holding their prey. The Samoan name for **eel** is *pusi*.



Ff

F is for **flatworm**. **Flatworms** have soft, flat bodies. On the coral reef, **flatworms** can usually be found under boulders, where they feed on different types of small organisms.

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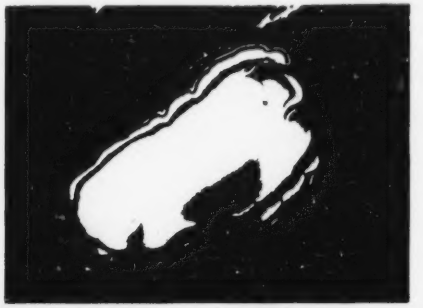

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Gg

G is for **Giant Clam**. The largest **giant clams** can weigh over 500 pounds and live up to 200 years. Tiny algae that live in the body of **giant clams**, produce food for the clams. These tiny algae are also responsible for the variable colors and patterns that are found among **giant clams**. The Samoan name for giant clam is *fiasua*.

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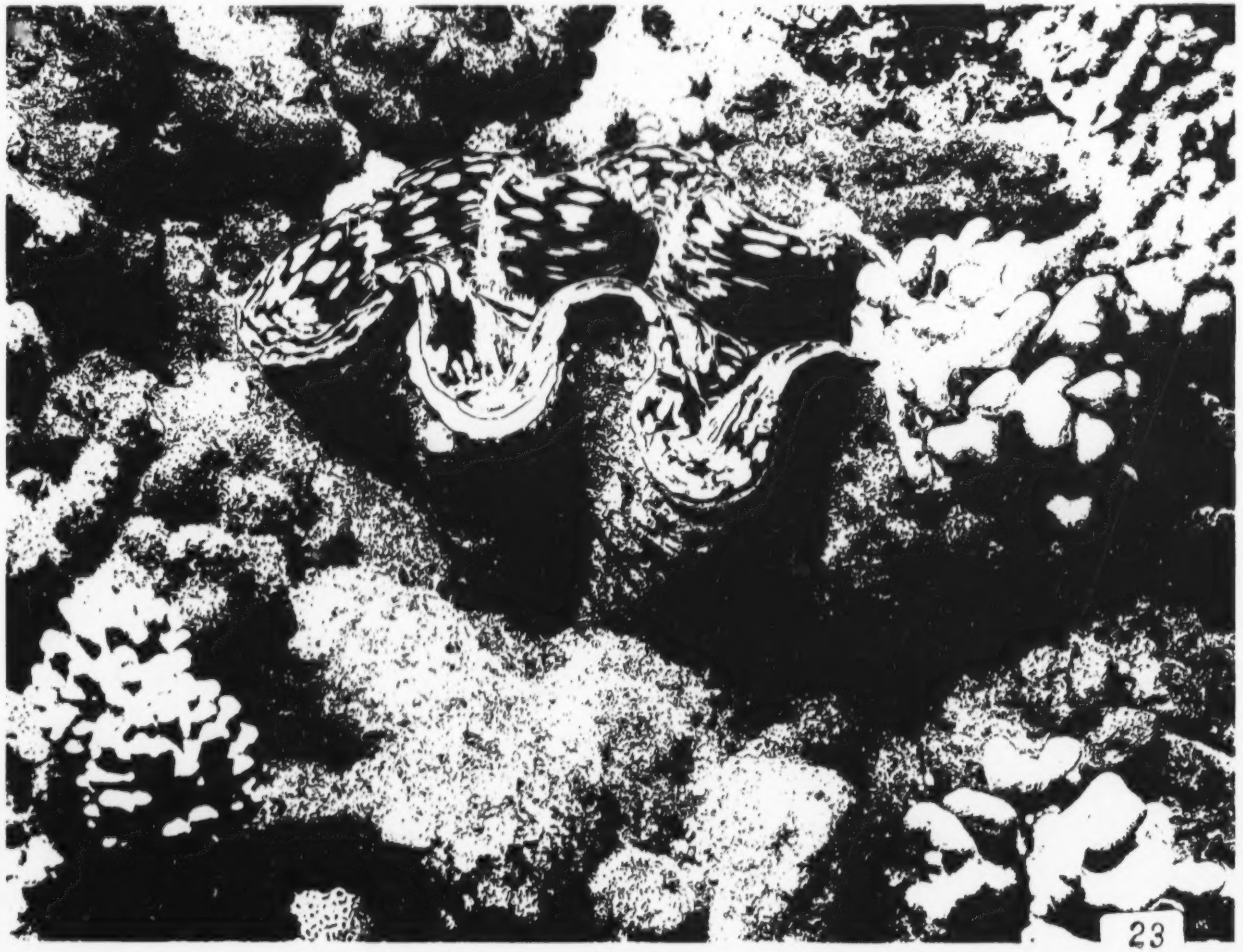

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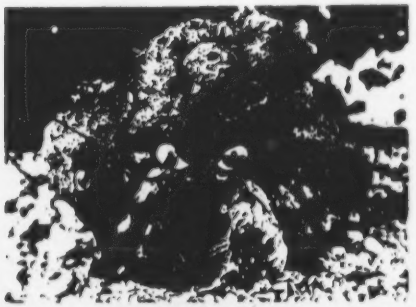
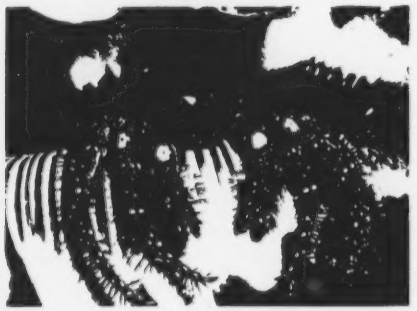
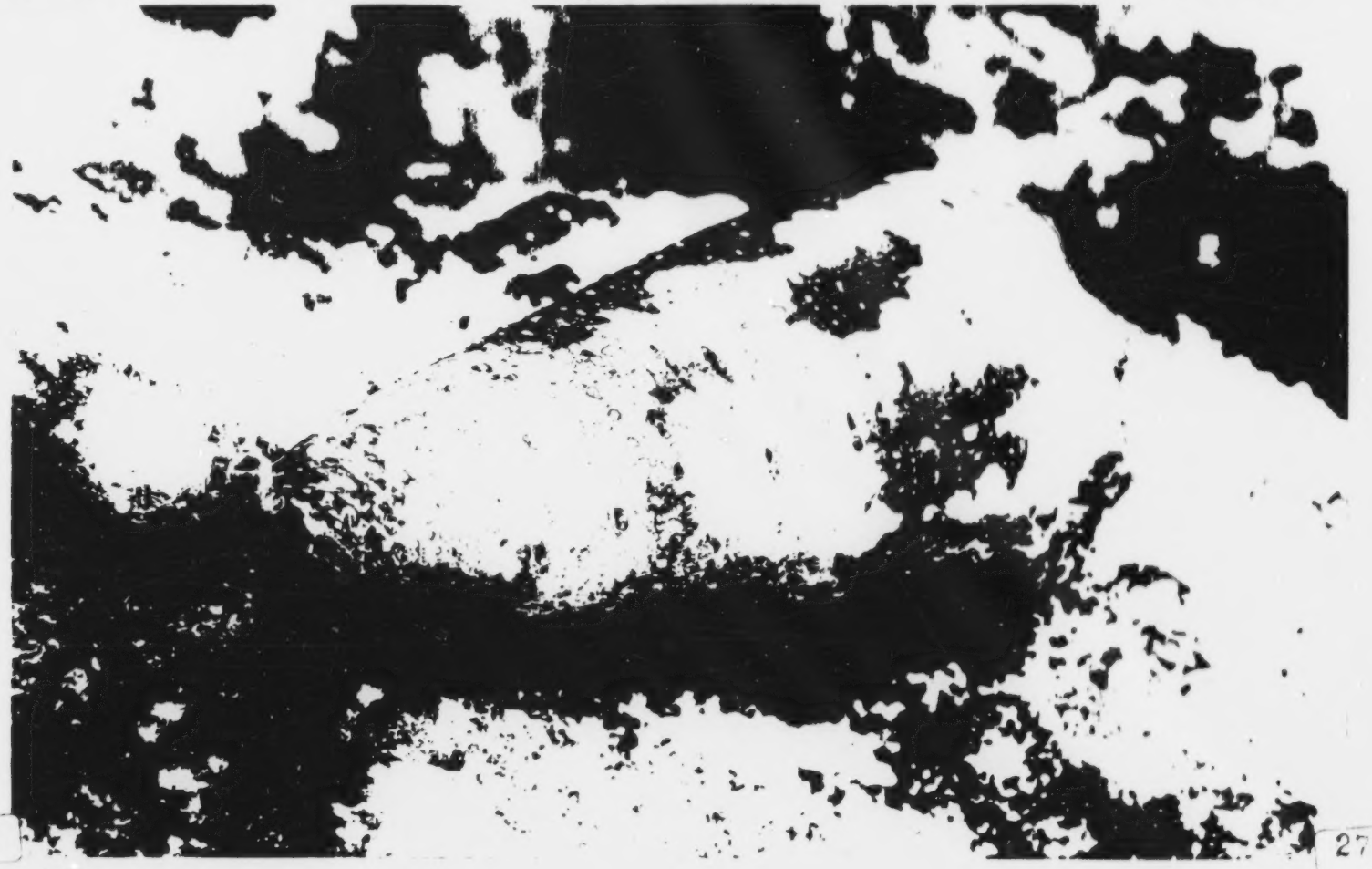
Hh

H is for **hermit crab**. ***Hermit crabs*** *use empty shells as their homes. When a* ***hermit crab*** *grows too big* for its shell, it will look for a bigger one. If it finds a bigger shell to move into, it will leave the smaller shell behind for another **hermit crab**. Samoans call **hermit crabs** *uga*.



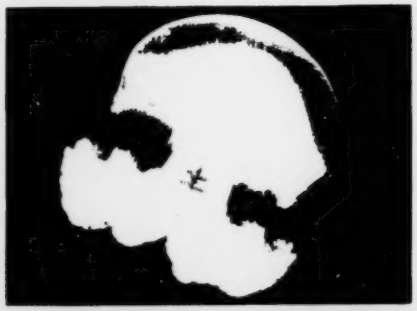


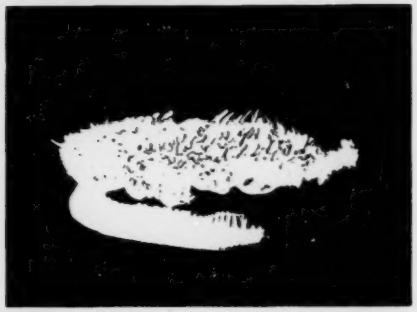
Ii I is for **imperial cone**. The **imperial cone** is a member of the group of snails called cones. This group is called cones because the shells are cone-shaped. All cones, including the **imperial cone**, use a harpoon to inject a poison to kill prey. The poison of some cones can even kill a human! This is why all living cones should be handled with caution.

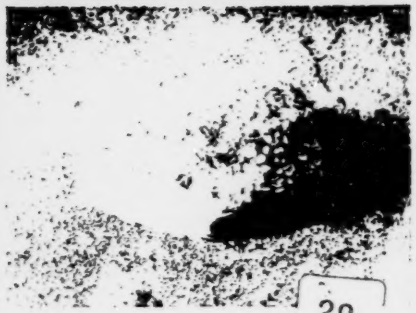


Jj

J is for **jellyfish**. **Jellyfish** are not really fish, but the bodies of **jellyfish** have a substance that is like jelly. Most **jellyfish** drift with ocean currents. One **jellyfish** sits on sandy bottoms and faces upward. This **jellyfish** is called the upside-down **jellyfish**. The Samoan name for **jellyfish** is *alualu*.



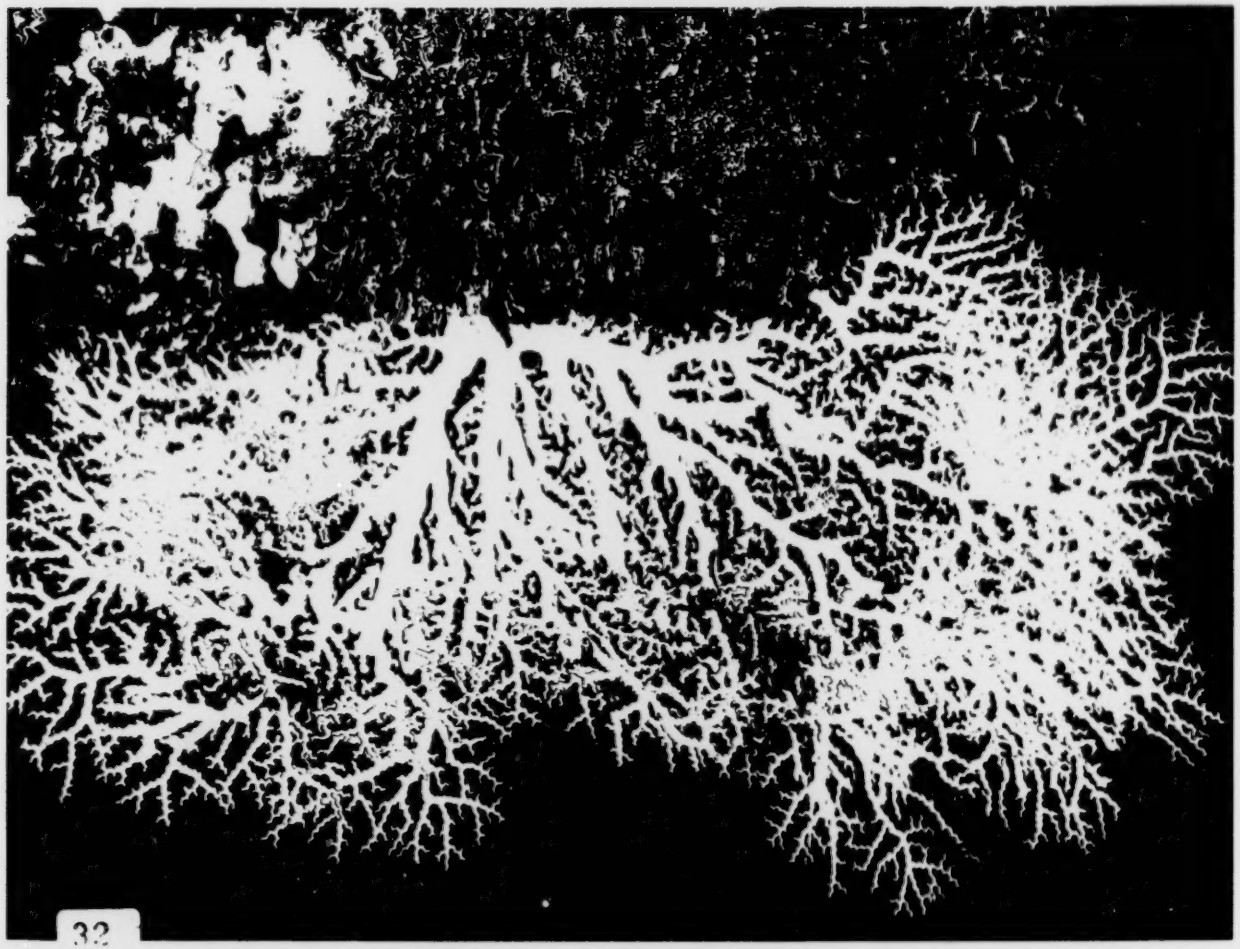


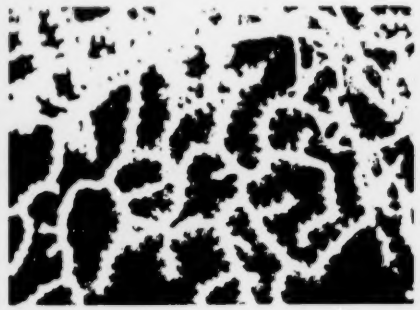


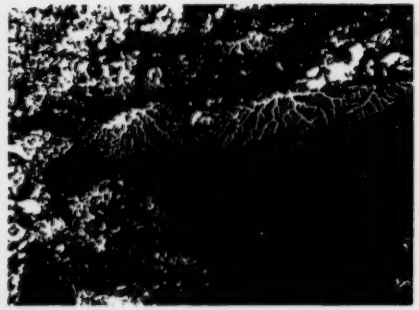
Kk

K is for ***kuku***. ***Kuku*** is the Samoan name for a common crab found on the coral reefs in Samoa. The ***kuku*** is easy to recognize because it has big red spots. Samoans enjoy eating this crab.

Ll L is for **lace coral**. **Lace coral** is beautiful coral that grows upside-down on the underside of ledges and overhangs. **Lace coral** is delicate and can break easily if touched.

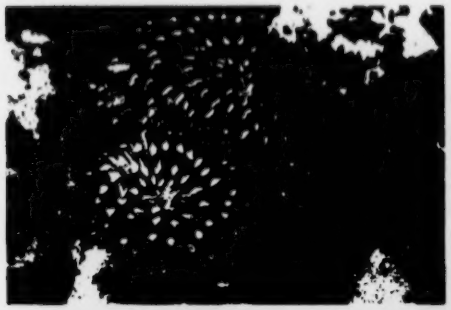


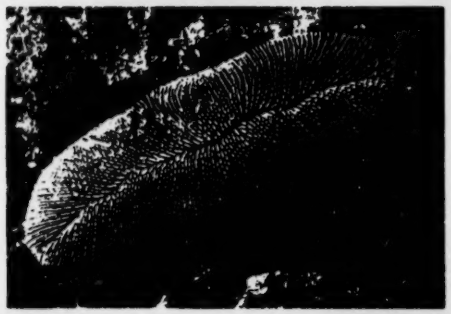


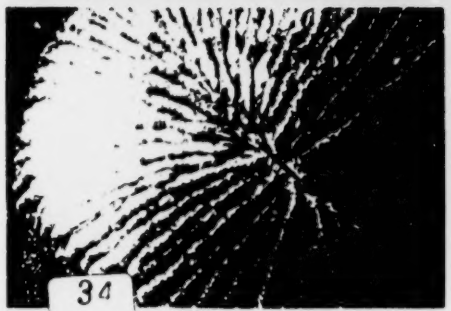


Mm

M is for **mushroom coral**. **Mushroom corals** are the largest individual corals that grow unattached on a coral reef. The top surface of **mushroom corals** have many thin ridges that look like the underside of a mushroom.







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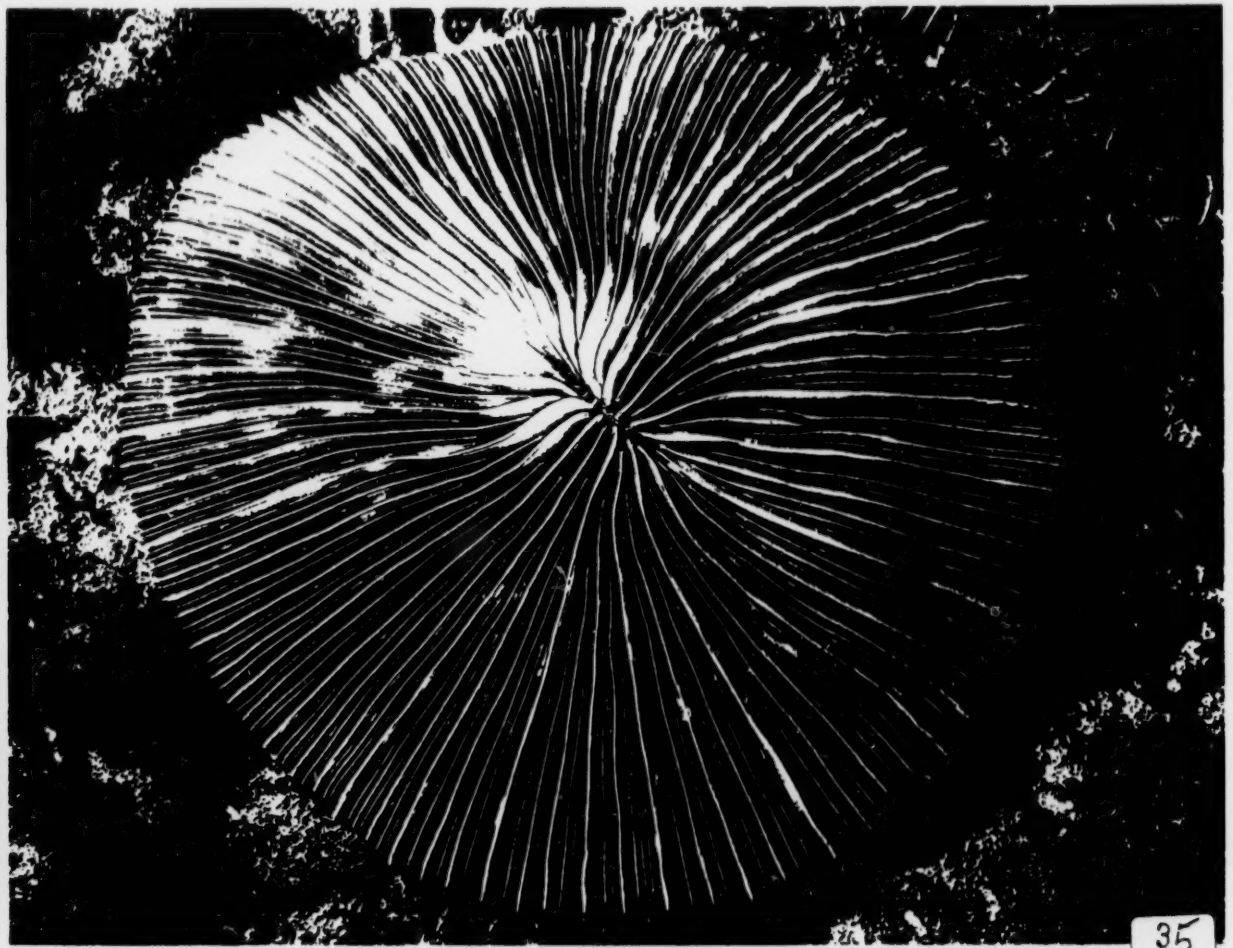

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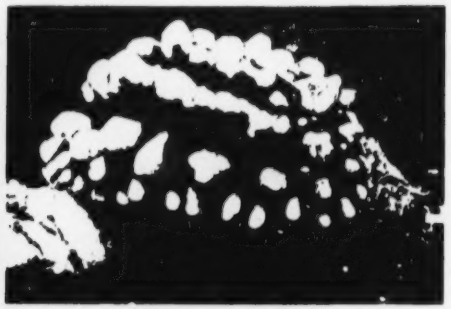
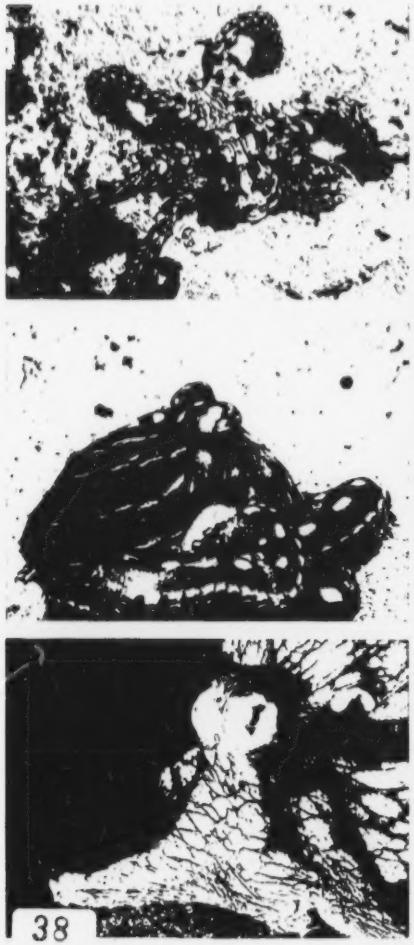
Nn

N is for **nudibranch**. **Nudibranchs** are beautiful sea snails that lack a hard shell for protection. As an alternative to a shell, **nudibranchs** have chemicals and poisons on their bodies that protect them from predators.



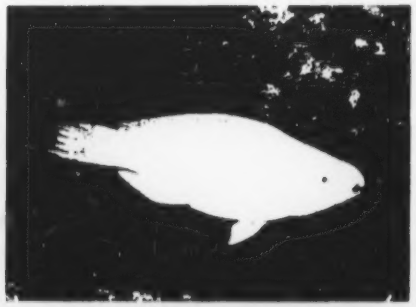
Oo

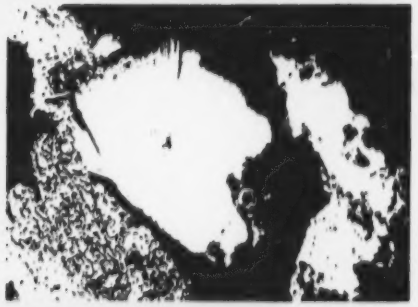
O is for **octopus**. **Octopuses** are shy animals, but they are one of the smartest animals living on a coral reef. They are masters of camouflage and can rapidly change colors to match their surroundings to avoid detection. The Samoan name for **octopus** is *fe'e*.

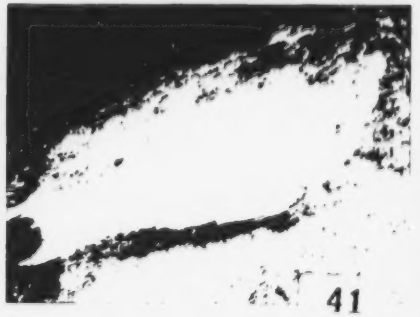


Pp

P is for **parrotfish**. **Parrotfish** have beaks that can bite off pieces of hard corals. After eating the coral, the **parrotfish** releases the skeletal parts, which then become grains of sand. The Samoan name for a medium size **parrotfish** is *fuga*.

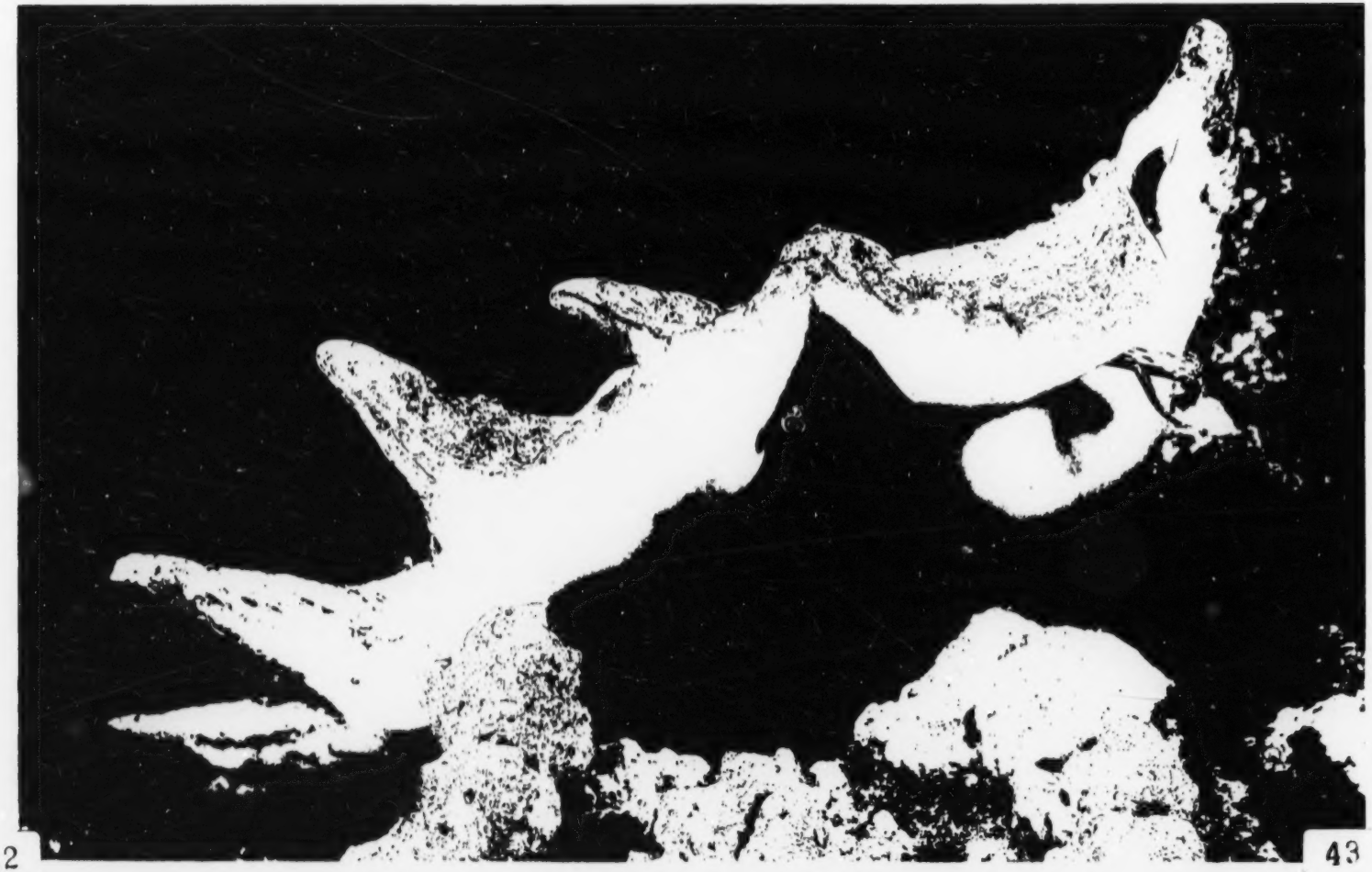






Qq

Q is for **queen spider conch**. The eyes of the **queen spider conch** are at the tip of long stalks. The **queen spider conch** uses these long stalks to peek out of its shell to see if it is safe to come out.



Rr

R is for **ribbon worm**. **Ribbon worms** are usually twisted and coiled like long pieces of ribbon. Some **ribbon worms** can be a meter long. They are usually found under loose boulders on the coral reef.

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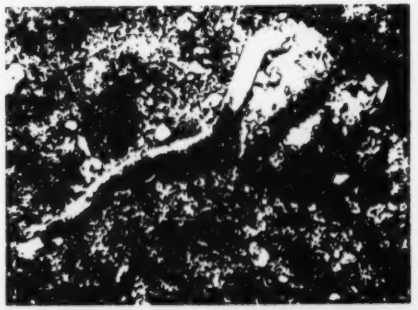

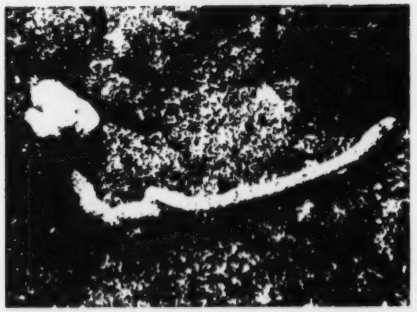

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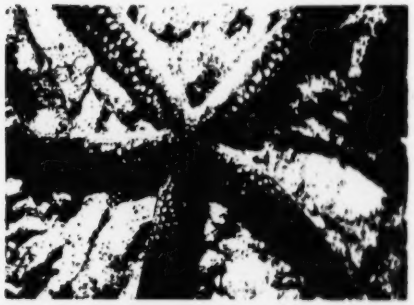
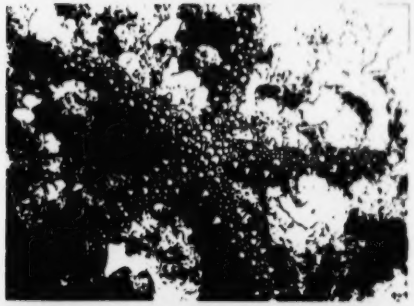
Ss

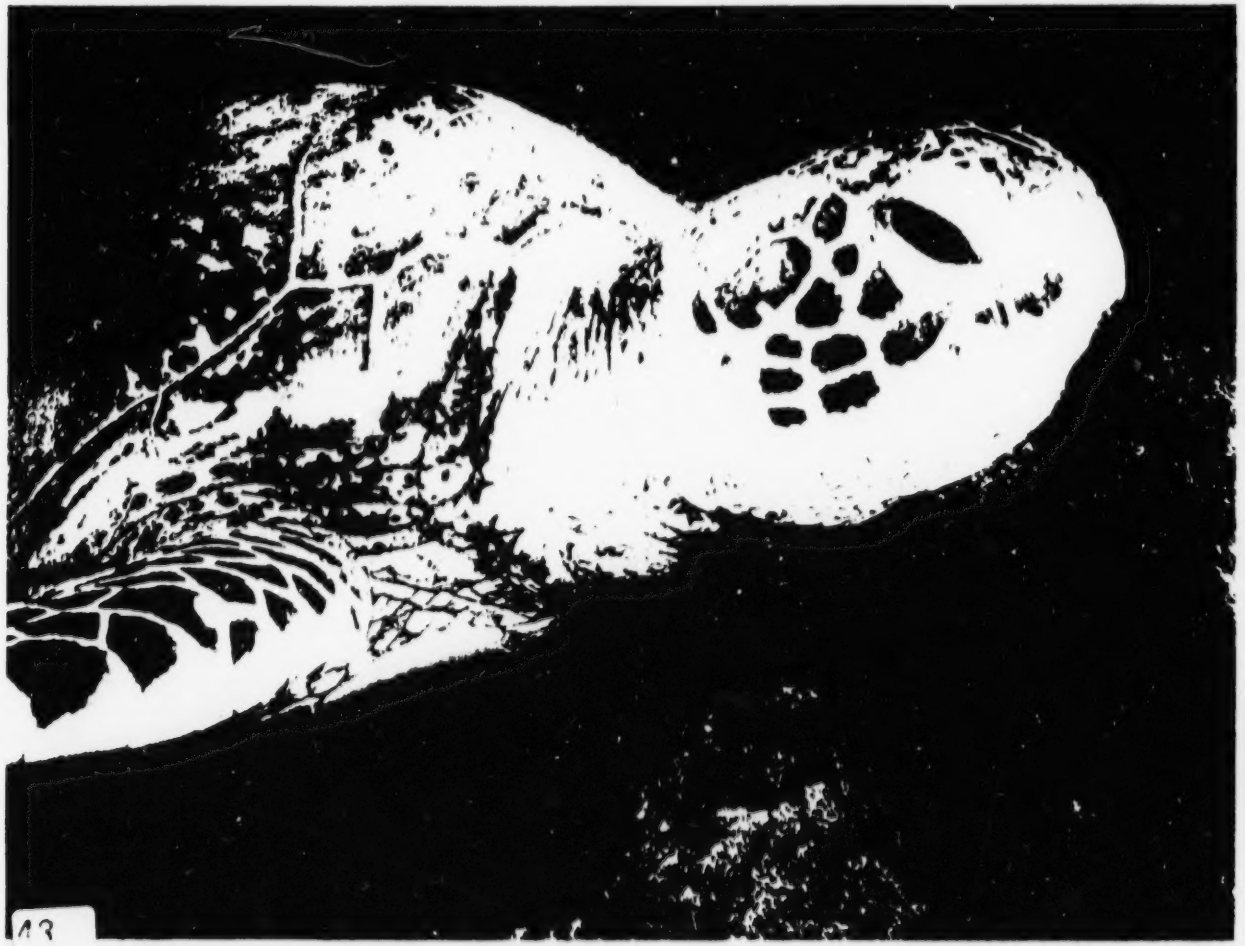
S is for **sea star**. **Sea stars** usually have five arms. When a **sea star** loses an arm, it can grow another to replace it. One **sea star** has very short arms and is puffy, so it is called the pillow **sea star**. The Samoan name for **sea star** is *aveau*.





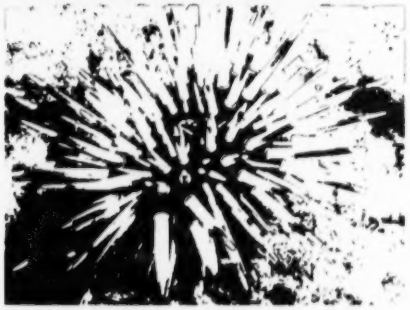
Tt

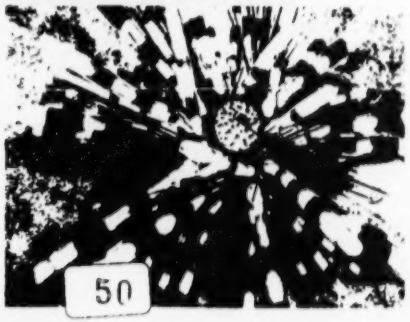
T is for **turtle**. Female sea **turtles** swim long distances to reach the same beaches where they hatched from, to lay their own eggs. Sea **turtles** feed on a variety of organisms that live and grow on a coral reef. The Samoan name for **turtle** is *laumei*.



Uu

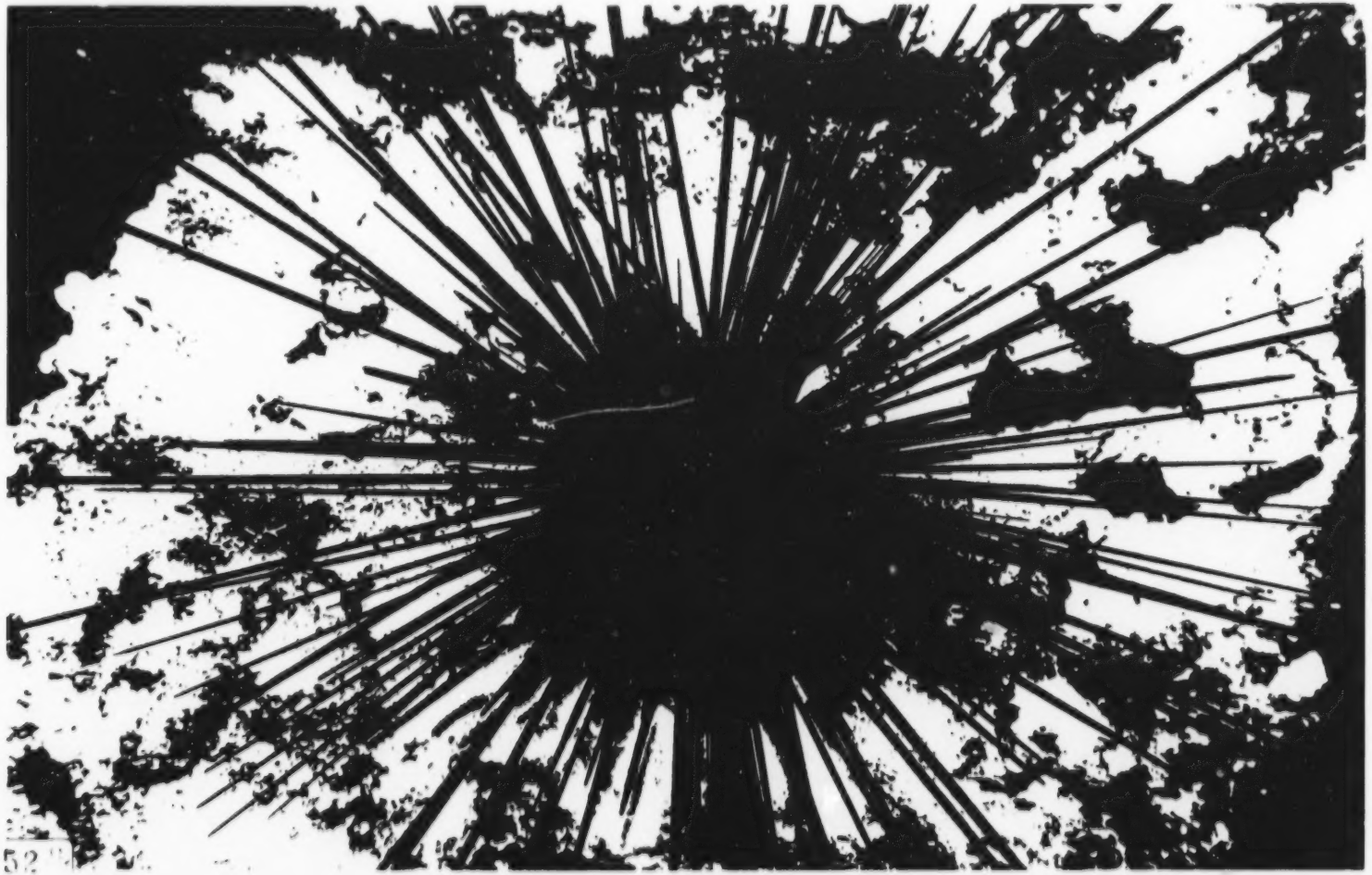
U is for **urchin**. Sea **urchins** have bodies covered with spines. Some spines are long and sharp for protection from predators. Other spines are short and used for burrowing into the sand. One of the most common sea **urchins** found on the coral reefs in Samoa, is the *tuitui*.





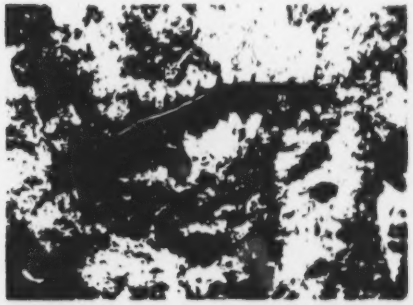
Vv

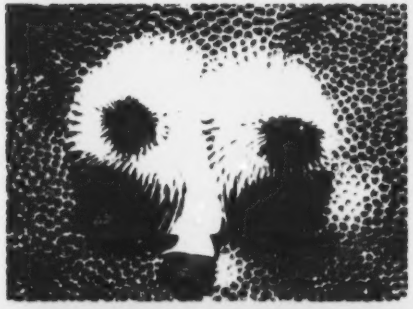
V is for ***vaga***. ***Vaga*** is the Samoan name for a black sea urchin that has long needle-like spines. This sea urchin is dangerous and should be handled with care. During certain times of the year, some mature internal parts of this sea urchin are eaten by Samoans.



Ww

W is for **worm**. There are many kinds of **worms** that live on a coral reef. Some **worms** have sharp bristles that can sting you. Some **worms** even look like a Christmas tree. Samoans like to eat the *palolo* **worm**.





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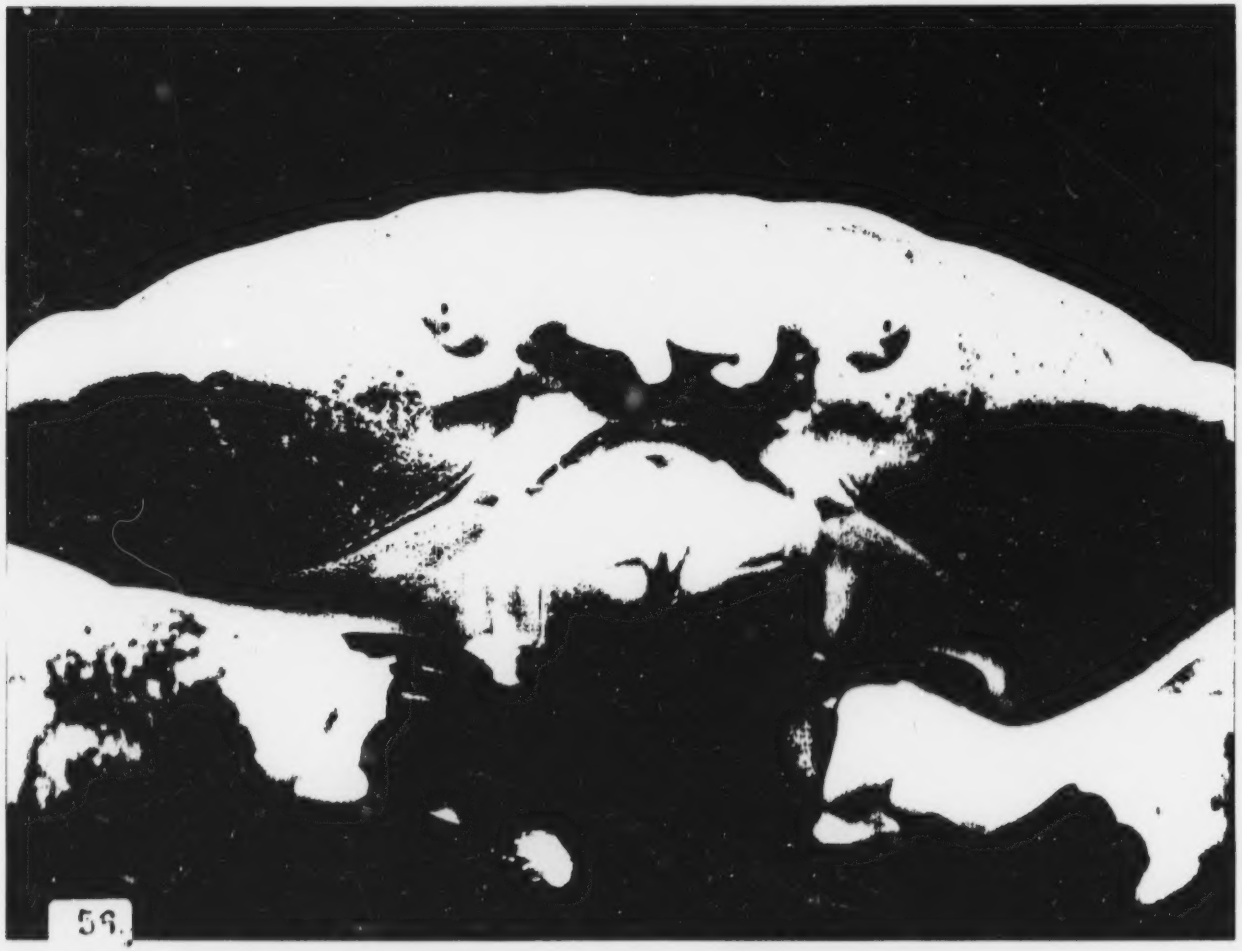
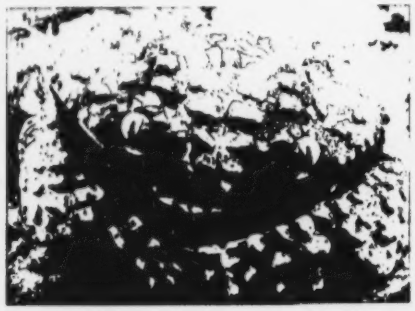
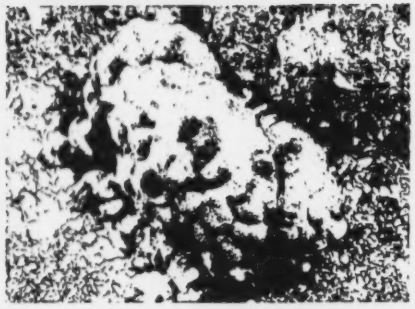
55

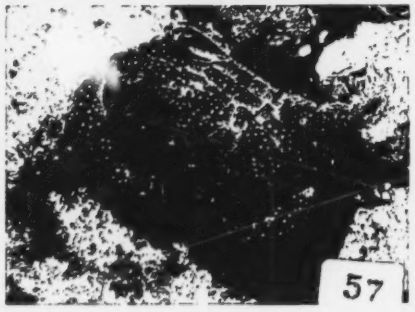
Xx

X is for **xanthid** crab. Xanthid crabs are commonly found hiding under rocks or in crevices of the coral reef.









Yy

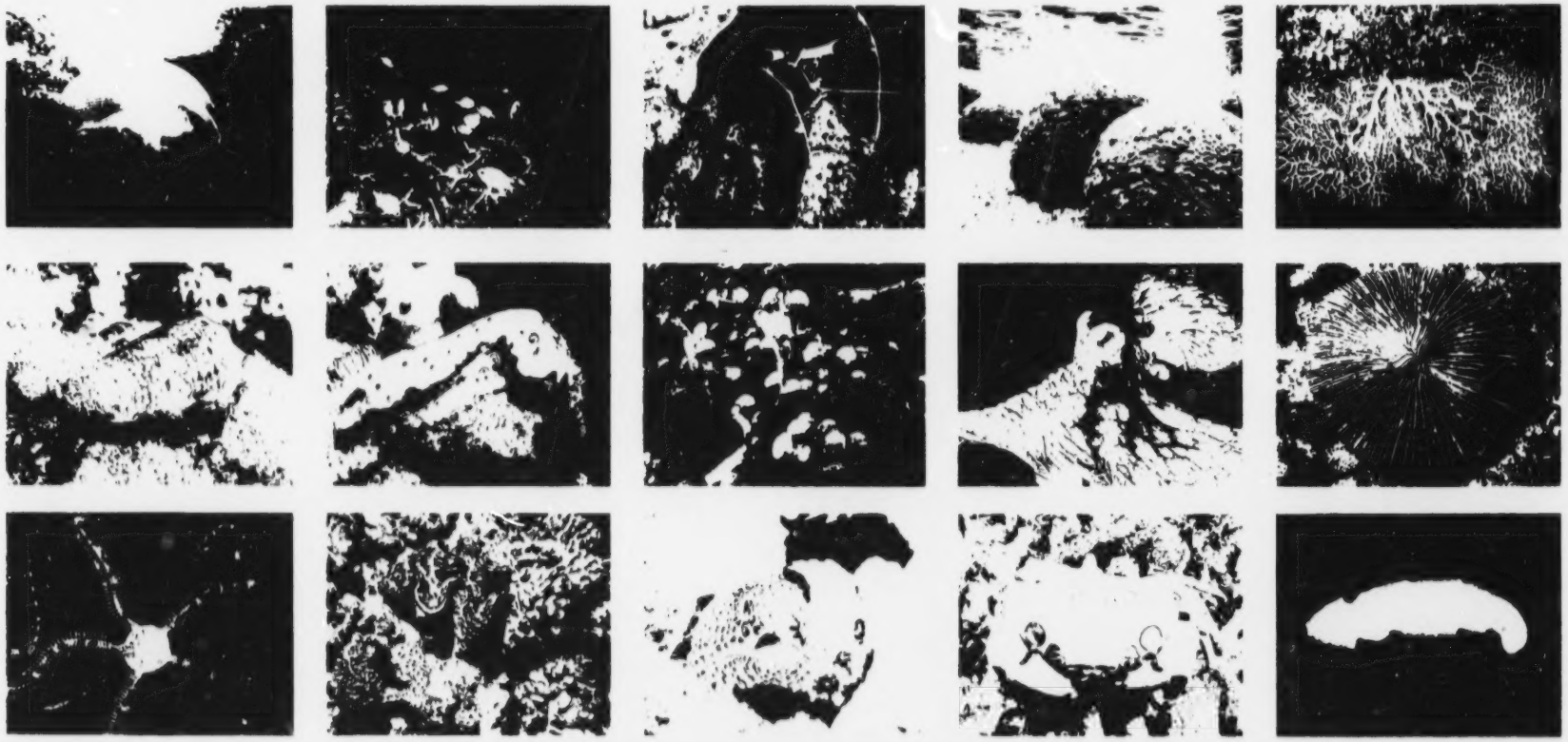
Y is for **yellowfin goatfish**. **Yellowfin goatfish** are common reef fish that stay together in groups during the day. At night, they scatter over the sand bottoms looking for food.

Zz

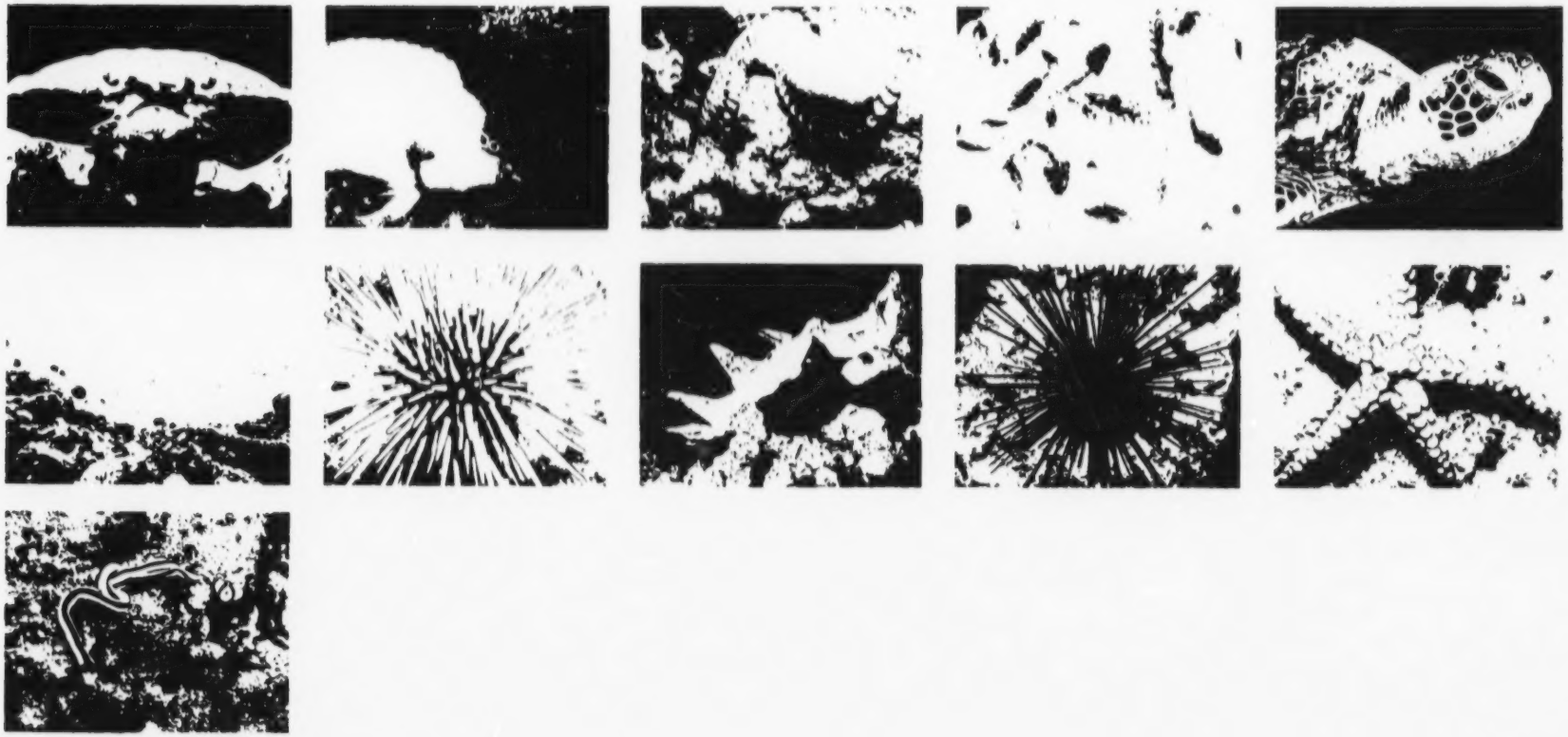
Z is for **zooplankton**. Most **zooplankton** are tiny animals that drift with the currents. Larger animals like fish and whales feed on **zooplankton**.

Try to match the following names to the correct reef organism pictured on these pages.

Algae **B**rittlestar **C**oral **D**amselfish **E**el **F**latworm **G**iant Clam **H**ermit Crab
Imperial Cone **J**ellyfish **K**uku **L**ace Coral **M**ushroom Coral **N**udibranch



Octopus **P**arrotfish **Q**ueen Spider Conch **R**ibbon Worm **S**ea Star **T**urtle
Urchin **V**aga **W**orm **X**anthid Crab **Y**ellowfin Goatfish
Zooplankton



Glossary

Boulder - a large rock.

Bristles - short stiff hair or hairlike projections.

Burrow - a hole or tunnel.

Camouflage - a color pattern that matches environmental surroundings used by animals to hide from predators.

Chemical - any substance made or used in chemistry.

Colony - a group of similar organisms living or growing together.

Crevice - a crack or opening.

Filament - a slender threadlike structure.

Harpoon - a spearlike weapon.

Organism - any living plant or animal.

Predator - an animal that kills and eats another animal.

Prey - any animal that is killed and eaten by another animal.

Projection - something that extends out.

Skeleton - the supporting and protecting structure of animals, composed of bones and cartilage in vertebrates.

Stalk - any slender or elongated supporting structure.

Substance - the material that forms a living or non-living thing.

About the Author

Tom Deminger

Larry Madrigal taught marine science for 13 years at Leone High School in American Samoa. In 1997, he moved to the Department of Education's Division of Curriculum and Instruction, where he coordinated territory-wide marine science educational programs. He is a self-taught photographer who states " underwater photography is just another hobby to explore the ocean realm." This is his second book for the American Samoa Department of Education Marine Enhancement Program.